



Mousetrap-Powered Car

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TOOLS:

- [Multi-tool \(1\)](#)



PARTS:

- [Mousetrap \(1\)](#)
- [Dowel \(1\)](#)
- [Eye screws \(2\)](#)
the dowel fits into it
- [Monofilament line \(24"\)](#)
fishing line
- [Laser-cut wheels \(2\)](#)
use template here, make yourself, or order from Ponoko.com. I made these myself on Eyebeam's laser cutter - one of the perks of being a resident!
- [Paint-stirring stick \(1\)](#)
- [Ping pong ball \(1\)](#)
- [Duct tape \(1\)](#)

SUMMARY

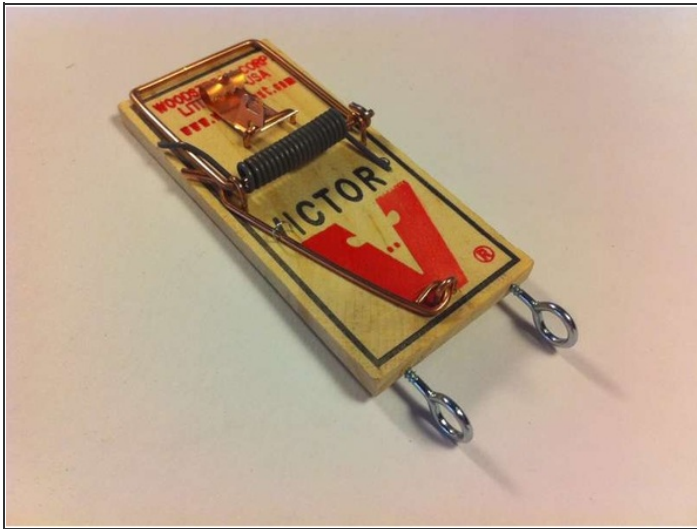
I built about 60 of these simple kits to show people how to make and race mousetrap-powered cars at two events run by artist Aki Sasamoto, co-director of Culture Push. The first was a [DOING workshop](#) where I taught a small group of 10 professionals from other fields. The second was a larger-scale public event called [Storm Your Brain](#), held with 100 people in attendance at the Whitney Museum as part of the Biennial. This is a fun project with just a few simple parts that just about anyone can make.

Step 1 — Mousetrap-Powered Car



- Mousetrap
- 1/4" diameter wooden dowel
- 2 eye screws that the dowel fits into (like McMaster-Carr #9496T27)
- 24" of monofilament (fishing line)
- 2 laser-cut wheels (use template [here](#), make yourself, or order from Ponoko.com. I made these myself on [Eyebeam](#)'s laser cutter - one of the perks of being a resident!)
- Wooden paint stirring stick
- Ping-pong ball
- Multi-tool with knife and file, duct tape

Step 2



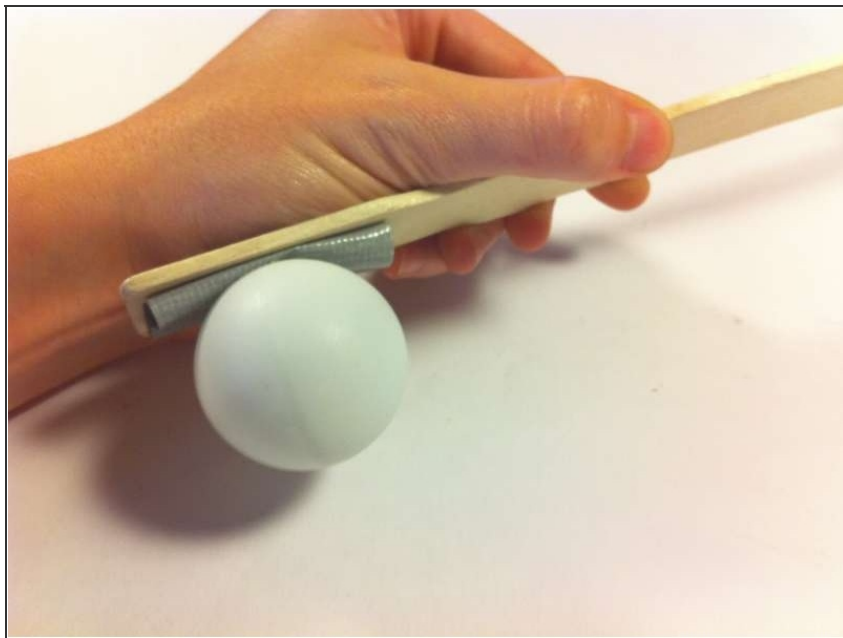
- Twist the eye screws into the side of the mousetrap opposite the “bait” hook. They should be as close to the edges as you can get them without splitting the wood.
- Duct-tape the mousetrap down to one end of the paint stirring stick. If the mousetrap arm is held down with a little staple-type thing, remove it.

Step 3



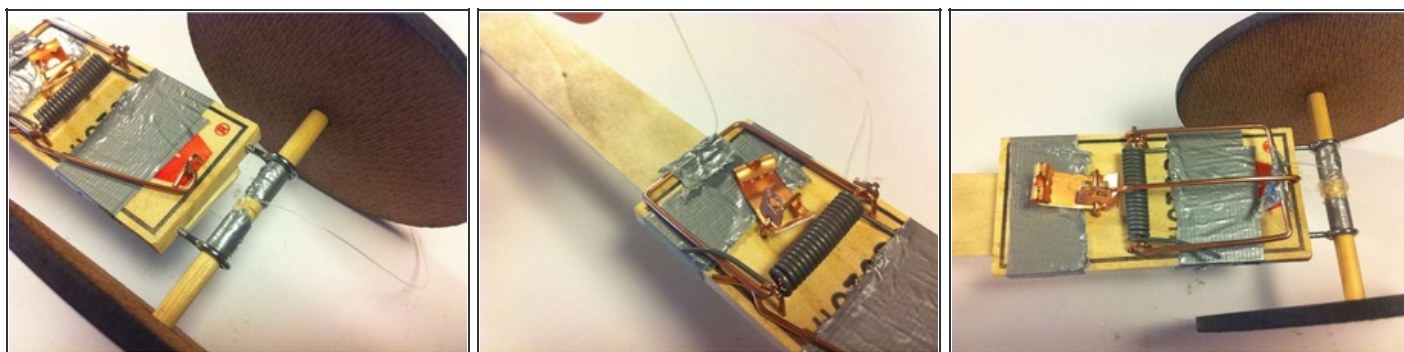
- Cut a 4" length of the wooden dowel by scoring it with your knife and snapping it with your fingers. File off any rough ends or edges.
- Check to make sure the wooden dowel fits through the eye screws and can spin freely. Too loose is okay, too tight is not. If it's too tight, use your file or some sandpaper to remove some material.
- Insert the wooden dowel into one of the laser-cut wheels. It should be snug. If it's too loose, wrap the dowel in a little duct tape and try inserting it again. If it's too big, use the file to sand down the end until it fits.
- Then feed the dowel through the two eye screws and attach the other wheel.

Step 4



- Duct-tape the ping-pong ball to the other end of the paint stick. If you set your car down now it should balance. The ping pong ball will skip along on just about any surface since it's so lightweight and smooth.

Step 5



- In order to stop the wooden dowel from sliding back and forth, wrap strips of duct tape around the dowel just inside the eye screws. The dowel should still spin freely. These also help the fishing line to stay centered and not get tangled in the eye screws.
- Cut a 2-ft. length of fishing line. Tie one end around the center of the wooden dowel. Tie the other end to the center of the the mousetrap arm. Secure with duct tape if necessary.
- Now spin the axle to wind the fishing line around it. When you get to the last few spins, help pull the mousetrap arm up and set the trap. To set the mousetrap, bring the long hook over the U-shaped arm and catch it on the “bait” hook. This takes a delicate touch sometimes - watch your fingers!!
- Once you’ve set your mousetrap, you’re ready to race! Set it down on the floor and use a pencil or other long object to trip the mousetrap. The fishing line attached to the arm will pull on the line wrapped around the axle and it will start to unwind. Your car should be able to go about 10 ft. with this design. Now try some variations and see if you can get the car to go faster or farther!

This project is an excerpt from my upcoming book, [Making Things Move](#).

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